BTEC Assignment Brief

Qualification	Pearson BTEC International Level 3 Subsidiary Diploma in Engineering Pearson BTEC International Level 3 Foundation Diploma in Engineering Pearson BTEC International Level 3 Diploma in Engineering Pearson BTEC International Level 3 Diploma in Electric/Electronic Engineering Pearson BTEC International Level 3 Diploma in Mechanical Engineering Pearson BTEC International Level 3 Diploma in Manufacturing Engineering Pearson BTEC International Level 3 Extended Diploma in Engineering Pearson BTEC International Level 3 Extended Diploma in Electric/Electronic Engineering Pearson BTEC International Level 3 Extended Diploma in Mechanical Engineering Pearson BTEC International Level 3 Extended Diploma in Manufacturing Engineering Pearson BTEC International Level 3 Extended Diploma in Aeronautical Engineering
Unit number and title	**Unit 44: Fabrication Manufacturing Processes**
Learning aim(s)	**D:** Review the processes used to manufacture a fabricated product and reflect on personal performance
Assignment title	3 Reflecting of the development of your knowledge, skills and work place behaviours
Assessor	
Issue date	
Hand in deadline	

Vocational Scenario or Context	In your new job as an apprentice product design engineer in a manufacturing company you have just completed your induction training on the shop floor and product development workshop. Your supervisor has asked you to reflect on the training activities completed in your induction. This will form part of the formal CPD (continued professional development) activities that you are required to undertake for your first year with the company. Reflecting upon, and recording the impact of CPD activities is a common requirement for all professional roles in engineering and can be used as you move forward to the next stage in your development as a professional engineer.

Task 1	You have been asked to review and reflect on your application and development of knowledge, skills and workplace behaviours when carrying out fabrication activities. You need to produce a short report that reflects on your progress and areas that need to be developed. **To do this:** You will need to produce a written report explaining how health and safety, fabrication manufacturing processes and general engineering skills were applied to the manufacture of the fabricated product. You should review and reflect on the practical activities you have carried out in assignments 1 and 2, and explain the importance and use of behaviours when carrying out fabrication activities. **You will then:** You need to produce a professional report which reviews and reflects on the activities that you have completed, including information about what went well, lessons learnt and what improvements you could make, explaining what would be done differently next time. In your report you will need to consider how the following knowledge, skills and behaviours were applied during the manufacture of a sheet metal product: • Management of health and safety at work • Specialist fabrication skills • General engineering skills • Applicable workplace behaviours You should also identify and analyse areas of improvement in the set up and use of tools and equipment and applicable workplace behaviours.
Checklist of evidence required	A portfolio of evidence including a written report of containing appropriately referenced images and diagrams to support the text. The report should make reference to and contain excerpts from the training log book maintained during the manufacture of a sheet metal product.

Criteria covered by this task:	
Unit/Criteria reference	To achieve the criteria you must show that you are able to:
44/D.D3	Demonstrate consistently good technical understanding and analysis of fabrication processes and the application of relevant behaviours and general engineering skills to a professional standard.
44/D.M4	Recommend improvements to the set up and use of fabrication processes and the relevant behaviours applied.
44/D.P6	Explain how health and safety, fabrication and general engineering skills were applied during the manufacture of the product.
44/D.P7	Explain how relevant behaviours were applied.

Sources of information to support you with this Assignment	**Textbooks** Fournier, R, *Sheet Metal Handbook*, Penguin Putnam Inc, 1987 ISBN 9780895867575. Useful practical handbook covering many traditional metal forming techniques used in low volume manufacturing. Timings, R, *Fabrication and Welding Engineering*, Newnes, 2008 ISBN 0750666919. Provides comprehensive coverage of sheet metalworking and welding in the manufacture of fabricated products. Wakeford, R, *Sheet Metal Work Workshop Practice,* Special Interest Model, 1987 ISBN 9780852428498. Useful practical guide to working with sheet metal. Reflective writing; Wiiliams K, Wooliams M, Spiro J; Palgrave McMillan (2012); ISBN 978 0 230 37725 7 Report writing; Reid M; Palgrave McMillan (2012); ISBN 978 0 230 37655 7 **Websites** britishmetalforming.com is the homepage of the Confederation of British Metalforming, a UK trade body representing the interests of the metal forming industry. hse.gov.uk is the homepage of the Health and Safety Executive in the UK that provides a wealth of information including guides to health and safety regulations and risk assessment. qualitytool.com/resources/Design-Handbook-Rev3.pdf is a useful guide to industrial cutting and forming processes, Quality Tool. thelibraryofmanufacturing.com/index.html is a useful online resource that covers a range of manufacturing processes including sheet metal fabrication, thelibraryofmanufacturing.com Above are some examples of websites. Further useful resources may be found at http://qualifications.pearson.com/en/support/published-resources.html#step1